DESIGN PANEL NO. 32 9-23-97

PCM INTERFACE THREAD ASSESSMENT - Shawn Quinn

OVERVIEW

This thread establishes the initial capability to monitor PCM link FD's. Recording, Retrieval, Data Bank, Application Services, Display Services, Data Distribution, System Build services and Test Build services will support basic CCMS format PCM FD's.
The Space Shuttle Main Engine, Pulse Code Modulation (PCM) downlink interface consists of three separate one-way telemetry data streams from the Orbiter Main Engine Controllers (MEC) via the Engine Interface Units (EIU). This downlink is the primary method for the Space Shuttle Main Engines to communicate measurements, health, and status to the ground system.

Note: Space Shuttle Main Engine PCM Support will not be provided for Thor.

ACTIONS

ACTIONS	ACTIONEE	DUE DATE	STATUS

No actions required

ISSUES

1. SSME PCM will not be provided for in Thor. Work through Kirk Lougheed and Jeff Lee. Assigned to Ken Clark

2. Distribute a draft copy of PCM Gateway Requirements document to O&M personnel. Assigned to Chau Lee

3. Describe how CLCS will document Software (IDD,API, etc) interfaces (equivalent of 070-21). Assigned to Rodney Davis

4. What is the CLCS plan for controlling models during RTPS development, and long term? Can it be done from a CC W/S. Assigned to Scott Estes

5. Add a SOW item to the Regression Test Thread. Define how TCIDs will be developed and utilized long term for system software integration and performance testing. Assigned to Dave Reinhardt. (See also issue #4)

6. Does CLCS detect loss of bit lock with PCM minor frame? Assigned to Chau Le

Approved

DESIGN PANEL NO. 32 9-23-97

GSE AND GATEWAY COMMON SERVICES COMLETION THREAD ASSESSMENT - Shawn Quinn

OVERVIEW

This thread provides a fully functional Ground Support Equipment (GSE) Gateway. This is needed to allow deployment to the Hypergolic Maintenance Facility in the Atlas delivery. Addition will be needed later in the project to support integrity, redundancy management, and special data handling. These will be covered in a redundancy thread.

ACTIONS	ACTIONEE	DUE DATE	STATUS

No action required

ISSUES

1. What level of recovery dump, patch and display capabilities will be provided by RTPS. Assigned to Oscar Brooks and Carl Duncan

Approved

DESIGN PANEL NO. 32 9-23-97

LAUNCH DATA BUS INTERFACE PHASE 1 THREAD ASSESSMENT - Shawn Quinn

OVERVIEW

This thread establishes the initial capability to monitor and command the Launch Data Bus. The Launch Data Bus is the interface between the Orbiter data processing system and all applicable ground facilities for test, checkout, maintenance, preflight, and post-flight phases. In addition, this common software interface provides the RTPS with access to the devices that are attached to the Launch Data Bus when the General Purpose Computers (GPC) are not active on the Launch Data Bus.

Highlights:

- Basic Launch Data Bus function in SACS and TCS-1 mode.
- GPC Memory Reads
- GPC Memory Writes
- DEU Keystrokes

ACTIONS ACTIONEE DUE DATE STATUS

No action required

ISSUES

1. Define how RTPS will test the LDB capabilities defined by the LDB gateway thread both during the Thor delivery time and post Thor. Assigned to Shawn Quinn

Approved

DESIGN PANEL NO. 32 9-23-97

END TO END GATEWAY DATA DEMONSTRATION THREAD ASSESSMENT - Shawn Quinn

OVERVIEW

This thread will demonstrate the ability to collect data from all CCMS link types. The purpose of this thread is to lay the foundation for orbiter power up in Atlas.

Highlights:

- Produce the equivalent data stream produced by the Consolidated System Gateway using real Gateways.
- Provide displays for all data types on all links.

Demonstrate data collection and transfer from the Video Simulation Interface thru the Gateway, DDP and HCI for those displays.

ACTIONS	ACTIONEE	DUE DATE	STATUS

No action required

ISSUES

1. What is the requirement for Gateway to do if processing is stopped? Assigned to Ken Clark

2. What is the CLCS project going to do about manpower deficiency/schedule problems with End to End Data Demo? Assigned to Shawn Quinn

Not approved

DESIGN PANEL NO. 32 9-23-97

DATA FUSION COMPLETION THREAD ASSESSMENT - Jamia Brogan

OVERVIEW

Data Fusion involves computations using constants, measurement values, health values, or other fusion values. The result of the computations are values which have types equal to the data fusion Function Designators (FDs) found in the CLCS Databank. Each fusion FD found in the databank has the same attributes that any other FD of the same type would have.

The Data Fusion Thread establishes the CLCS capability to provide information using multiple FDs. This thread will support initial Data Fusion editing, loading, processing, distribution, system viewing, logging, and retrieving.

ACTIONS	ACTIONEE	DUE DATE	STATUS

No action required

ISSUES

1. Determine if there is a Thor update required for configuration management. (How does configuration management protect for debug code from getting into operational systems?) Assigned to John Wilkinson.

Not approved: Panel provided changes to the document and made recommendations for the resolution to the issues. The document will be reviewed by panel members when all changes have been incorporated.